Virginia Department of Rail and Public Transportation

Rail Enhancement Fund
FY 2009 Applications

Kevin Page
Chief of Rail Transportation

Rail Advisory Board Meeting
April 9, 2008

Guiding Principles of Rail Enhancement Fund

- Intended to support growth of freight and/or passenger rail transportation
  - Railways or railroad equipment
  - Rolling stock
  - Rights-of-way
  - Facilities
- Projects funded by minimum 30% local/private funds and maximum 70% Commonwealth funds
- Project policy goals
  - Has a public benefit ratio greater than or equal to one
  - Addresses needs identified in state, regional, or local plans
  - Encourages economic development
  - Focuses on quick turn-around, high impact projects that lead to an integrated SYIP for passenger and freight rail
  - Contributes to the effectiveness of the entire multimodal transportation system

REF Benefit Cost Analysis Approach

- Benefits computed from the incremental difference in rail vs. truck transportation costs for new capacity (existing usage is not included in the analysis)
- Train service categorized by commodity to determine tonnage of material and distance to final destination
- Unit transportation costs relate to: congestion, environment, road maintenance, and safety
- Primary benefits calculated in B/C analysis
  - Reduction in highway congestion costs
  - Reduction in highway maintenance costs
  - Reduction in highway accident costs
  - Reduction in environmental/pollution costs
- Additional benefits calculated:
  - Number of trucks reduced on highways
  - Fuel savings (gallons)
  - CO_2 emissions avoided (tons)
  - New employment (jobs)

REF Agreement Terms

- Railroad must certify capacity constraint for projects that will primarily increase capacity
- Grantee must provide baseline performance data
- Grantee is required to achieve increased performance as a result of project
- Failure to meet performance requirements entitles Commonwealth to repayment plus interest
- Grantee required to maintain project at no cost to the Commonwealth
- Must address other needs that contribute to the effectiveness of the entire multimodal transportation system

FY09 Applications

- Norfolk Southern – 22 projects
  - Freight: Coal Corridor Initiatives (3 projects)
  - Freight: Route 460 / Heartland Corridor Initiatives (6 projects)
  - Freight: I-81 Crescent Corridor (10 projects)
  - NS Passenger Corridor Initiatives (3 projects)
- CSX Transportation – 4 projects
  - Passenger: Fredericksburg, Richmond, and Newport News Passenger Rail Improvements
  - Passenger: VRE Fredericksburg – Washington, DC Third Track
  - Freight: National Gateway (2 projects)
- Virginia Railway Express (VRE) – 4 projects
  - Passenger: VRE Cherry Hill Station and Third Track Phase 2
  - Passenger: VRE Second Platforms
  - Passenger: Automatic Train Control System Arlington – Washington, DC
  - Passenger: VRE Gainesville - Haymarket Extension Phase 2

FY09 Applications

- Virginia Port Authority / Virginia Int. Terminals - 3 projects
  - NIT Central Rail Yard Expansion
  - Norfolk Portsmouth Belt Line Improvements
  - Craney Island Rail Connection
- Port of Richmond / City of Richmond – 1 project
  - Deepwater Terminal Railroad Improvements
- NCDOT Department of Rail – 1 project
  - SEHSR Tier II EIS Phase 2

April 9, 2008

FY2009 Rail Enhancement Fund
Recommended Projects

LEGEND

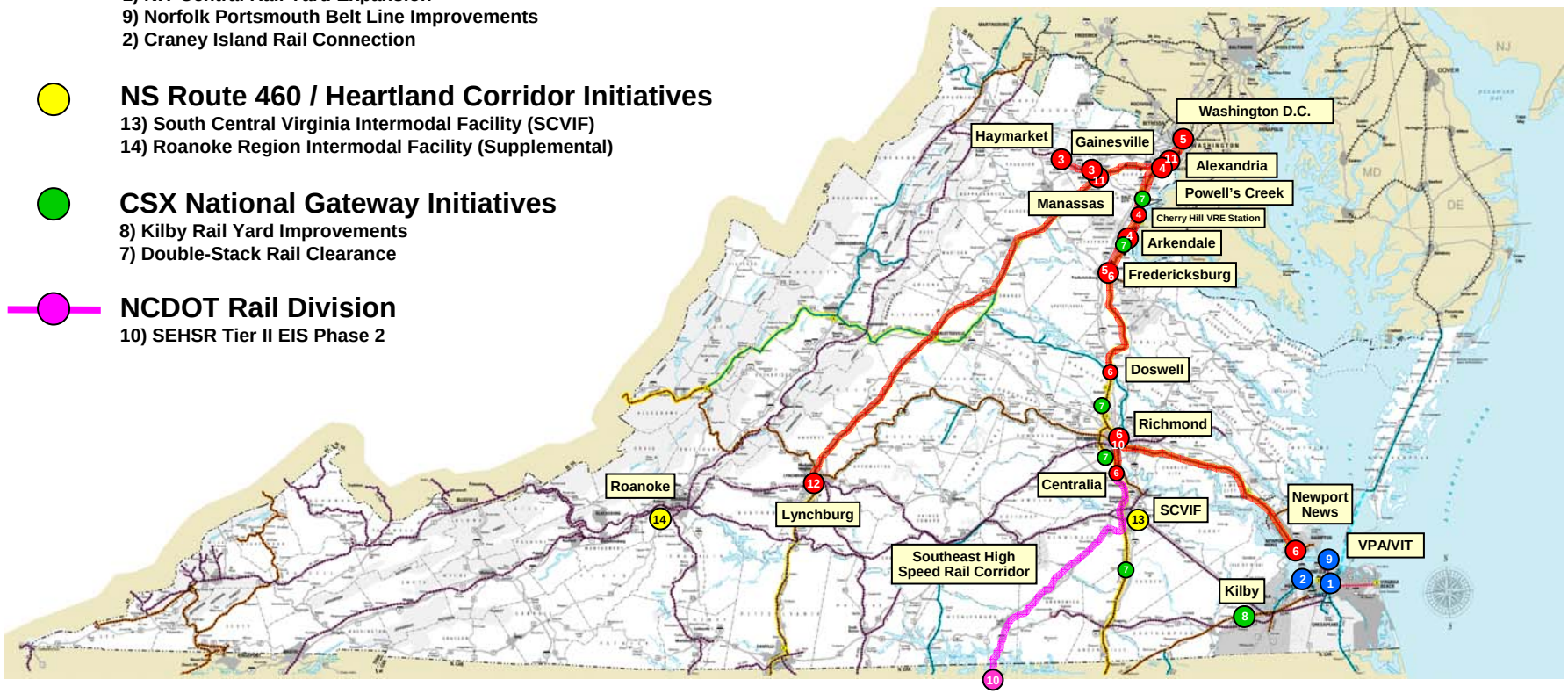
Passenger Rail Corridor Initiatives
11) NS: VRE Route - Alexandria to Manassas
12) NS: Alexandria to Lynchburg
6) Fredericksburg, Richmond and Newport News Passenger Rail Improvements
4) VRE Cherry Hill Station and Third Track Phase 2
3) VRE Gainesville - Haymarket Extension Phase 2
5) VRE Fredericksburg – Washington, DC Third Track

Virginia Port Authority / Virginia International Terminals
1) NIT Central Rail Yard Expansion
9) Norfolk Portsmouth Belt Line Improvements
2) Craney Island Rail Connection

NS Route 460 / Heartland Corridor Initiatives
13) South Central Virginia Intermodal Facility (SCVIF)
14) Roanoke Region Intermodal Facility (Supplemental)

CSX National Gateway Initiatives
8) Kilby Rail Yard Improvements
7) Double-Stack Rail Clearance

NCDOT Rail Division
10) SEHSR Tier II EIS Phase 2



2007 State Railroad Map

April 9, 2008

FY2009 Rail Enhancement Fund
Recommended Project

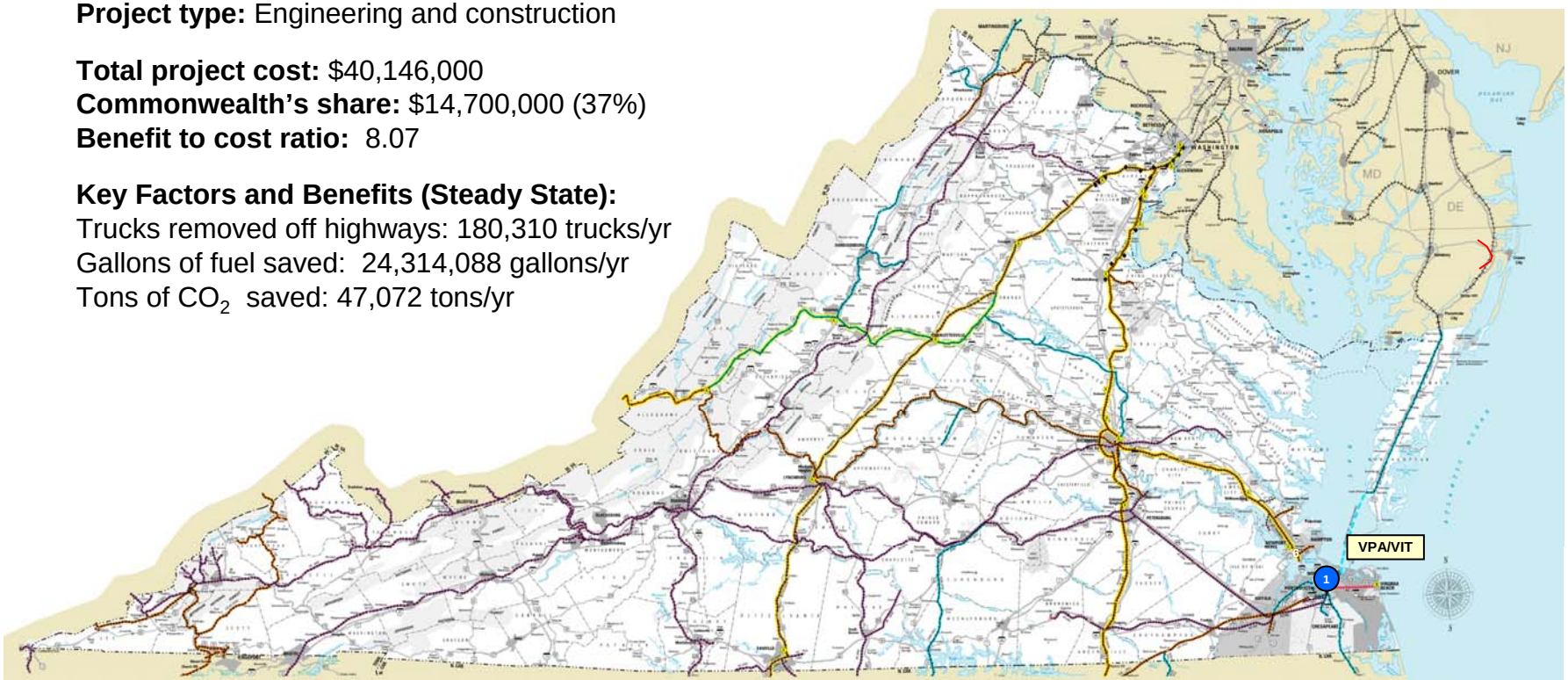
1 Virginia Port Authority / Virginia International Terminals
NIT Central Rail Yard Expansion

Description: The Norfolk Int. Terminals (NIT) project is a two-phase, $40 million rail intermodal yard expansion. The project will expand NIT's on-dock intermodal rail yard to a total capacity of 37,000 track feet through construction of an additional 24,000 feet of railroad track, ties and ballast, several switches, heavy-duty pavement in the rail yard area, container handling areas, and associated civil/site/utility and electrical infrastructure.

Project type: Engineering and construction

Total project cost: $40,146,000
Commonwealth's share: $14,700,000 (37%)
Benefit to cost ratio: 8.07

Key Factors and Benefits (Steady State):
Trucks removed off highways: 180,310 trucks/yr
Gallons of fuel saved: 24,314,088 gallons/yr
Tons of CO_2 saved: 47,072 tons/yr



2007 State Railroad Map

April 9, 2008

FY2009 Rail Enhancement Fund
Recommended Project

2 Virginia Port Authority / Virginia International Terminals
Craney Island Rail Connection

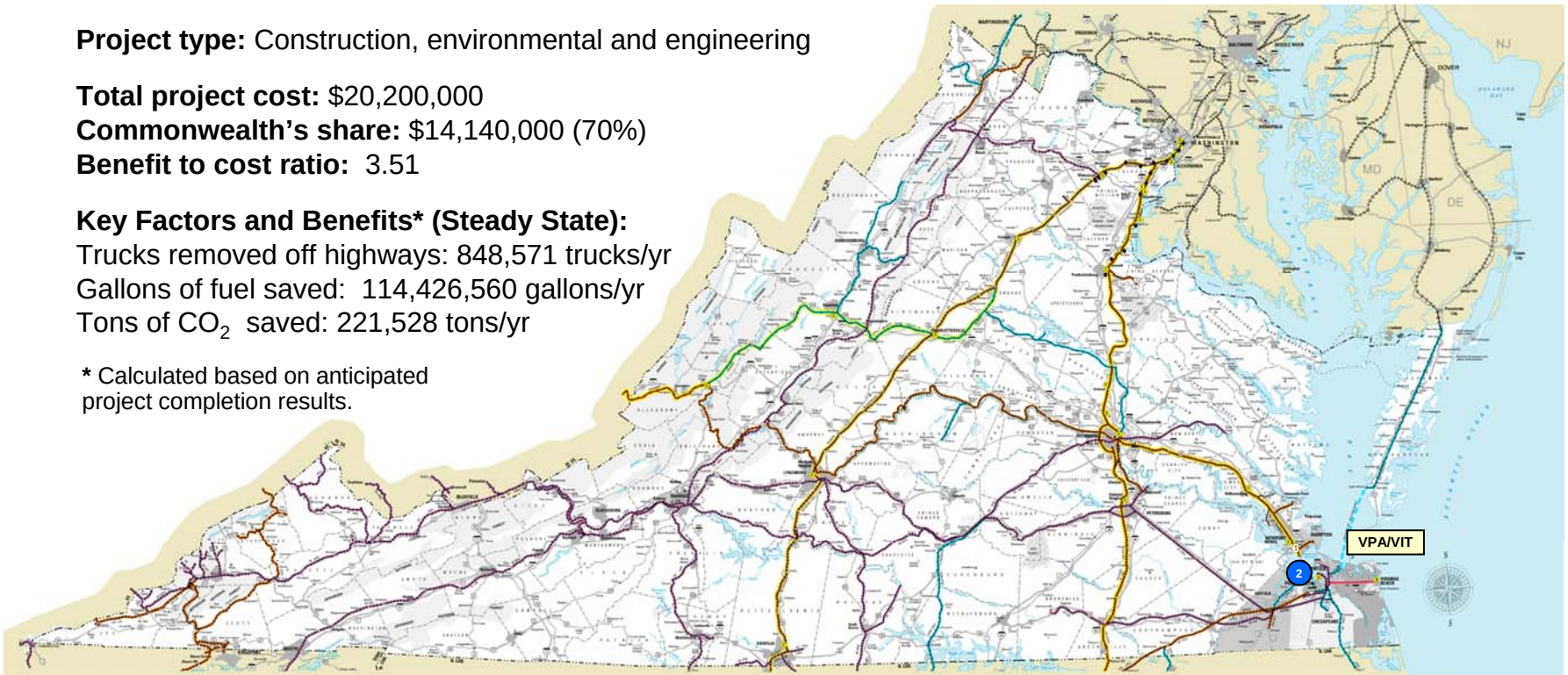
Description: The proposed Craney Island Marine Terminal (CIMT) is being developed to transport 50% of containerized cargo by rail through this major new Commonwealth facility. Phase I of the project is the construction of a siding track in the median of Route 164 from the Route 17 highway bridge to the APM Terminal track interface. Phase II includes the planning and design of a new track connection between the APM Terminal to the CIMT on-dock intermodal yard facility.

Project type: Construction, environmental and engineering

Total project cost: $20,200,000
Commonwealth's share: $14,140,000 (70%)
Benefit to cost ratio: 3.51

Key Factors and Benefits* (Steady State):
Trucks removed off highways: 848,571 trucks/yr
Gallons of fuel saved: 114,426,560 gallons/yr
Tons of CO_2 saved: 221,528 tons/yr

***** Calculated based on anticipated project completion results.



2007 State Railroad Map

April 9, 2008

FY2009 Rail Enhancement Fund
Recommended Project

3 **Passenger Corridor Initiatives**
VRE Gainesville - Haymarket Extension Phase 2

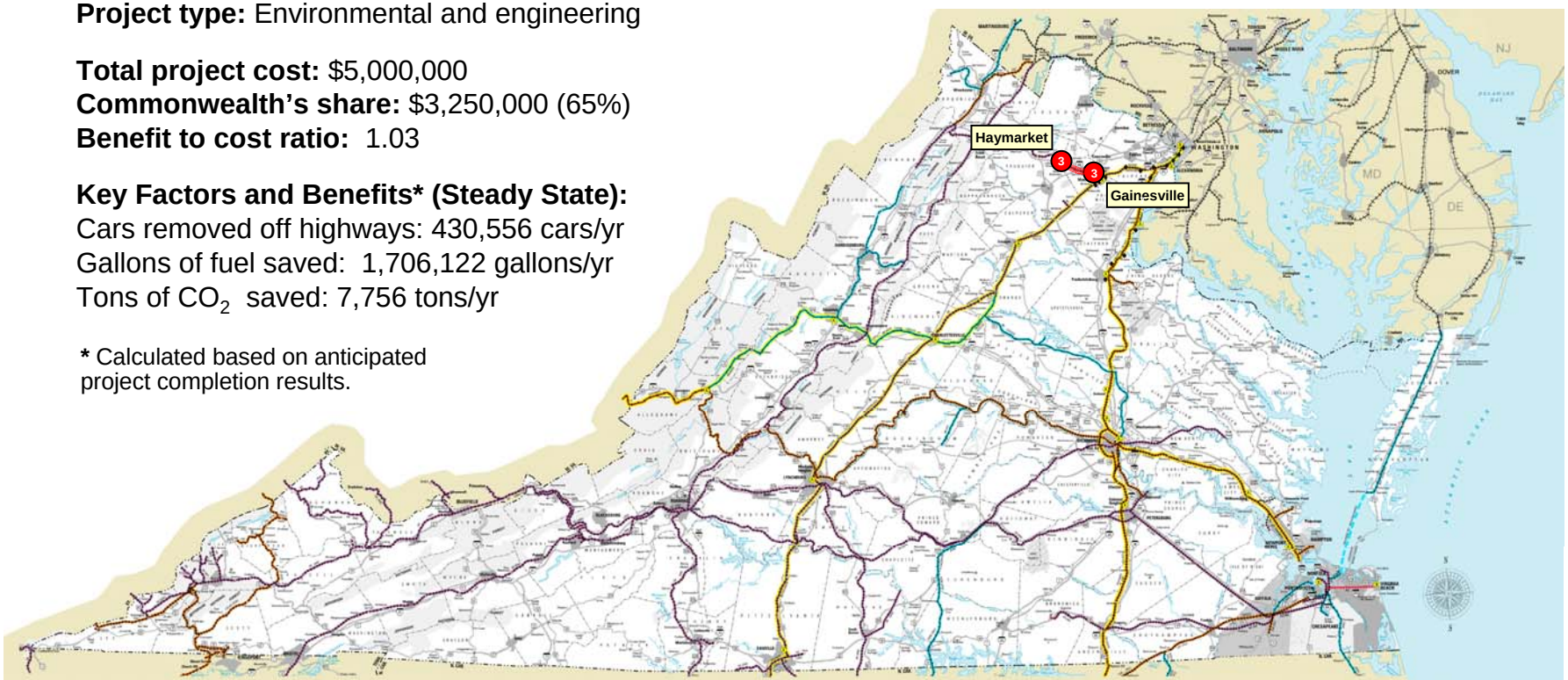
Description: The purpose of this project is to extend VRE commuter rail service 11 miles between the City of Manassas and Haymarket in the I-66 rail corridor. The extension would use existing NS rail right-of-way that is currently used exclusively by freight trains. Extensive upgrading of the existing line is anticipated to make tracks suitable for passenger operations. Project includes Phase II environmental work and preliminary design.

Project type: Environmental and engineering

Total project cost: $5,000,000
Commonwealth's share: $3,250,000 (65%)
Benefit to cost ratio: 1.03

Key Factors and Benefits* (Steady State):
Cars removed off highways: 430,556 cars/yr
Gallons of fuel saved: 1,706,122 gallons/yr
Tons of CO_2 saved: 7,756 tons/yr

***** Calculated based on anticipated project completion results.



2007 State Railroad Map

April 9, 2008

FY2009 Rail Enhancement Fund
Recommended Project

4 **Passenger Corridor Initiatives**
VRE Cherry Hill Station and Third Track Phase 2

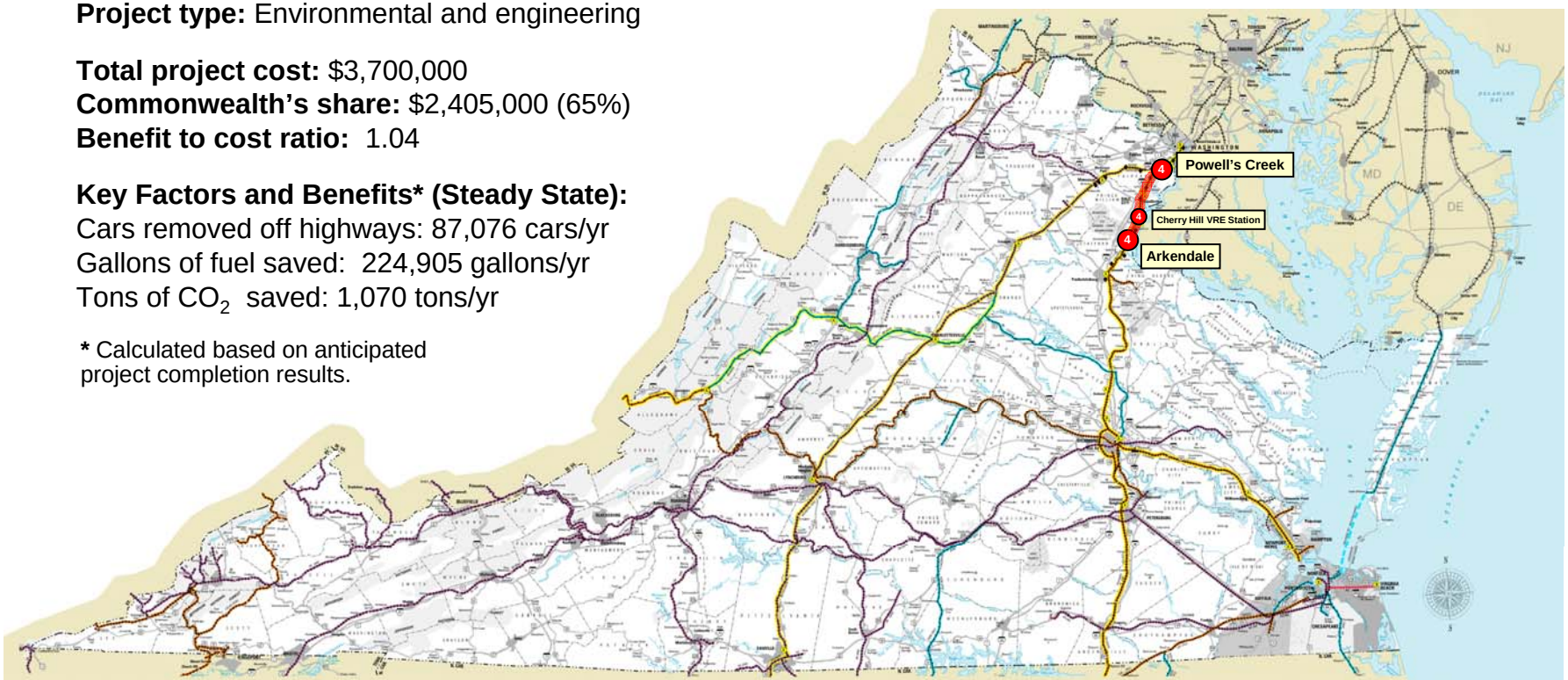
Description: The purpose of this project is to improve passenger rail service in the 11.4 mile corridor between Powell's Creek and Arkendale in the I-95 rail corridor. The project includes final design of a third track in CSX right-of-way, including a VRE station at Cherry Hill, slope stabilization, a parking facility and a highway grade separated bridge over CSX tracks.

Project type: Environmental and engineering

Total project cost: $3,700,000
Commonwealth's share: $2,405,000 (65%)
Benefit to cost ratio: 1.04

Key Factors and Benefits* (Steady State):
Cars removed off highways: 87,076 cars/yr
Gallons of fuel saved: 224,905 gallons/yr
Tons of CO_2 saved: 1,070 tons/yr

***** Calculated based on anticipated project completion results.



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April 9, 2008

FY2009 Rail Enhancement Fund
Recommended Project

5

Passenger Corridor Initiatives
VRE Fredericksburg – Washington, DC Third Track

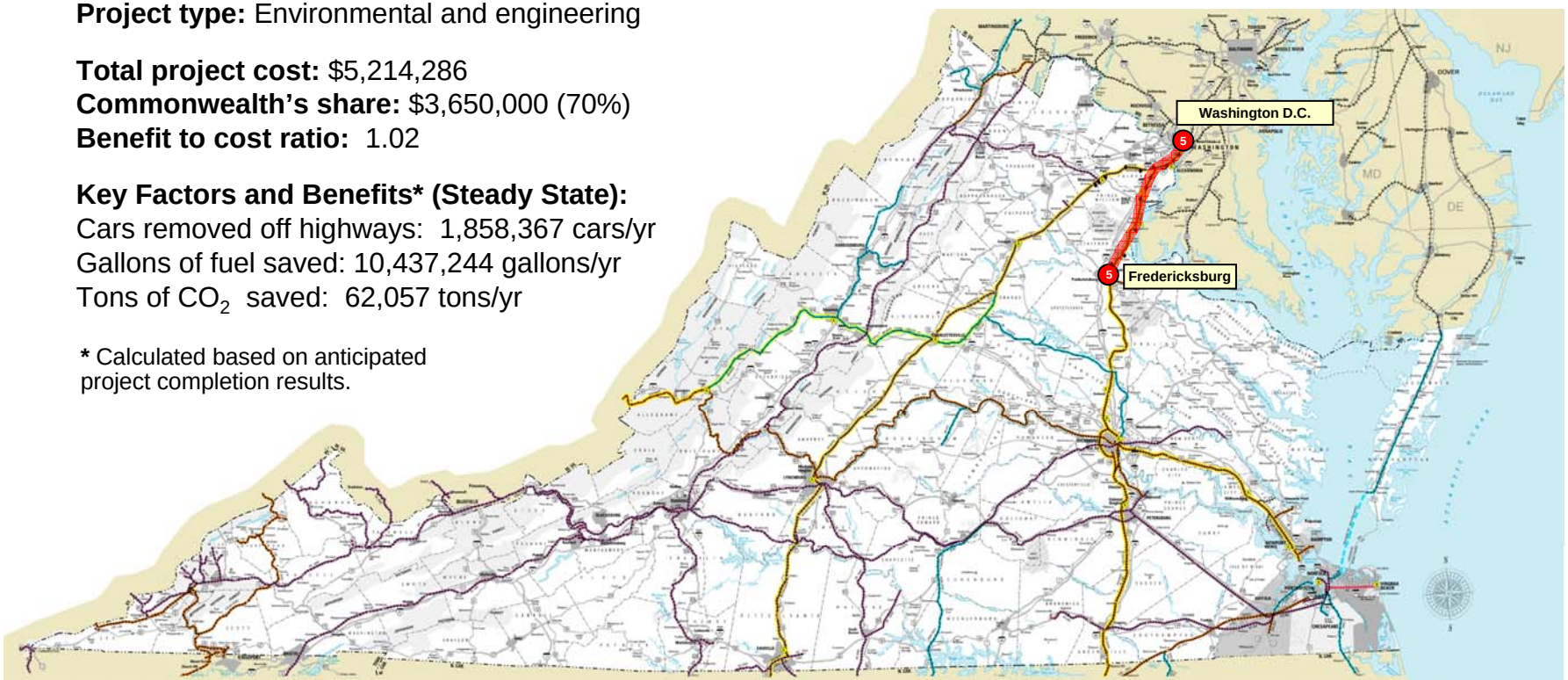
Description: VRE proposes to complete the remaining segments of the CSX third main track from Ravensworth in Washington, DC to Fredericksburg in the I-95 rail corridor. The improvements would increase capacity, significantly reduce delays and improve reliability for VRE, Amtrak and CSX. The project is for environmental and 30% design services (preliminary plans).

Project type: Environmental and engineering

Total project cost: $5,214,286
Commonwealth's share: $3,650,000 (70%)
Benefit to cost ratio: 1.02

Key Factors and Benefits* (Steady State):
Cars removed off highways: 1,858,367 cars/yr
Gallons of fuel saved: 10,437,244 gallons/yr
Tons of CO_2 saved: 62,057 tons/yr

***** Calculated based on anticipated project completion results.



April 9, 2008

FY2009 Rail Enhancement Fund
Recommended Project

Passenger Corridor Initiatives
Fredericksburg, Richmond, and Newport News Passenger Rail Improvements

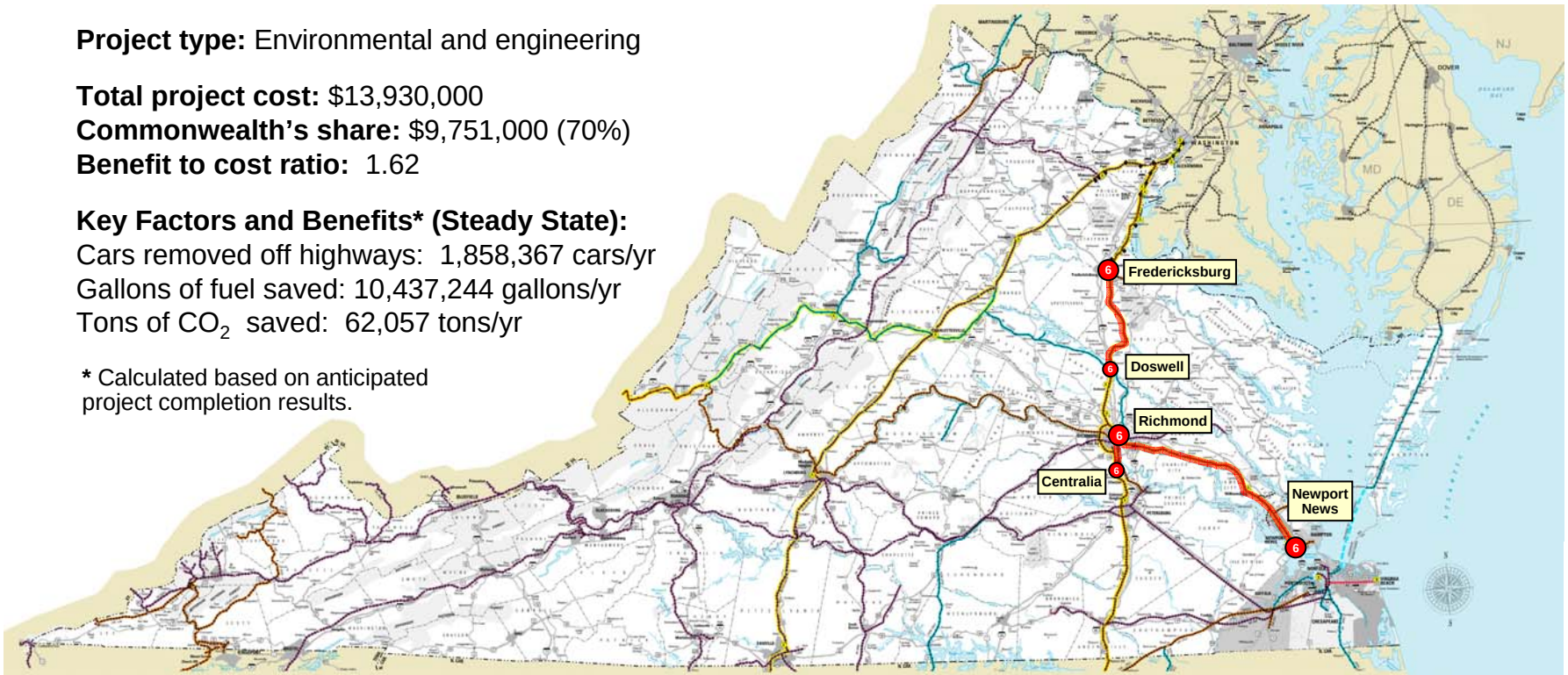
Description: CSX proposes to upgrade its facilities along the route between Fredericksburg, Richmond, Centralia and Newport News to allow existing and new passenger trains to bypass its congested Acca Yard in Richmond, significantly increasing the utilization of Richmond's Main Street Station and improving passenger and freight train performance along the I-95 and I-64 corridors in the Commonwealth. The project is for environmental and 30% design services (preliminary plans).

Project type: Environmental and engineering

Total project cost: $13,930,000
Commonwealth's share: $9,751,000 (70%)
Benefit to cost ratio: 1.62

Key Factors and Benefits* (Steady State):
Cars removed off highways: 1,858,367 cars/yr
Gallons of fuel saved: 10,437,244 gallons/yr
Tons of CO_2 saved: 62,057 tons/yr

***** Calculated based on anticipated project completion results.



2007 State Railroad Map

April 9, 2008

FY2009 Rail Enhancement Fund
Recommended Project

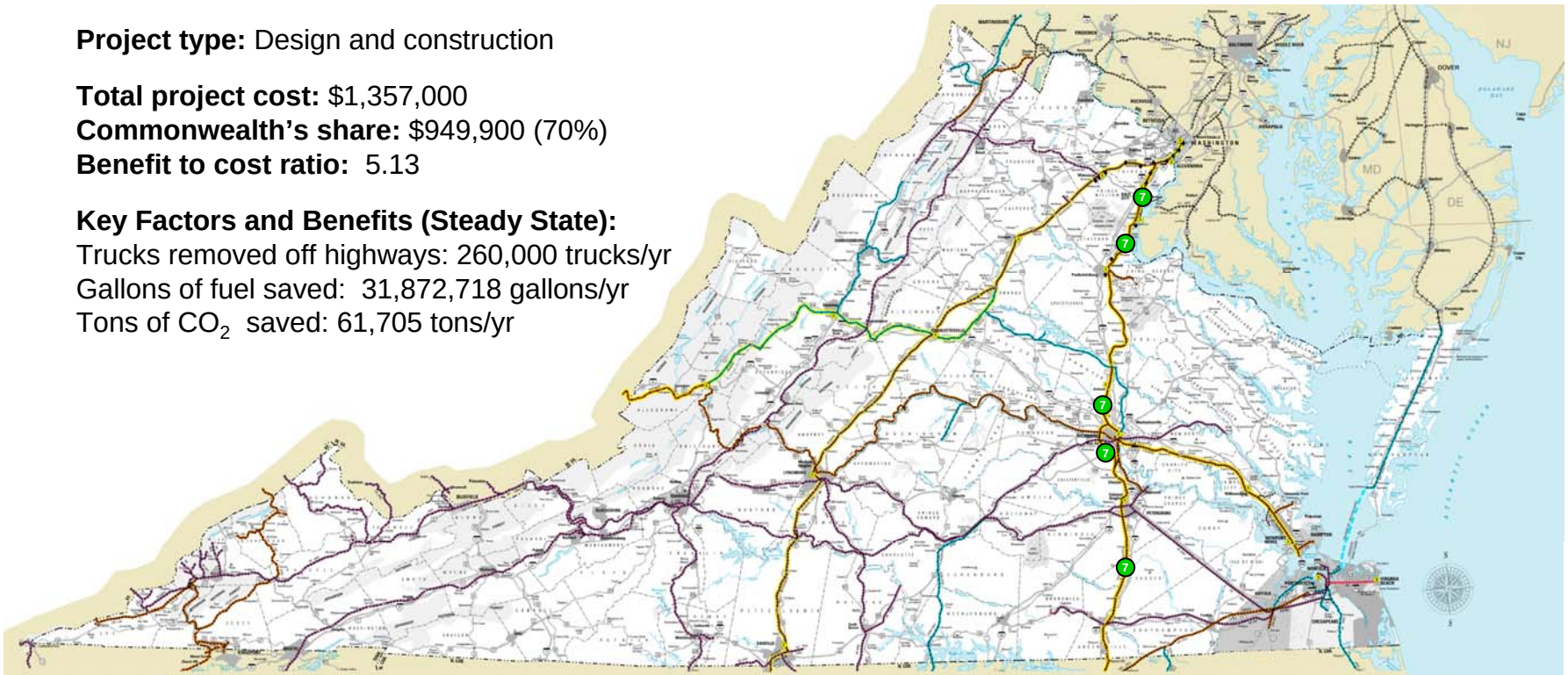
7 CSX National Gateway
Double-Stack Rail Clearance

Description: This project will integrate Virginia into the National Gateway program to provide the Ports of Hampton Roads with an enhanced double-stack rail connection on the CSX system. This project consists of the removal or modification of five existing bridges that obstruct the vertical clearance needed for double-stack rail operations on the I-95 Corridor between Weldon, NC and Washington DC. The project also includes environmental studies and 30% design (preliminary plans) for two new highway grade bridges in Virginia.

Project type: Design and construction

Total project cost: $1,357,000
Commonwealth's share: $949,900 (70%)
Benefit to cost ratio: 5.13

Key Factors and Benefits (Steady State):
Trucks removed off highways: 260,000 trucks/yr
Gallons of fuel saved: 31,872,718 gallons/yr
Tons of CO_2 saved: 61,705 tons/yr



2007 State Railroad Map

April 9, 2008

FY2009 Rail Enhancement Fund
Recommended Project

8 CSX National Gateway
Kilby Rail Yard Improvements

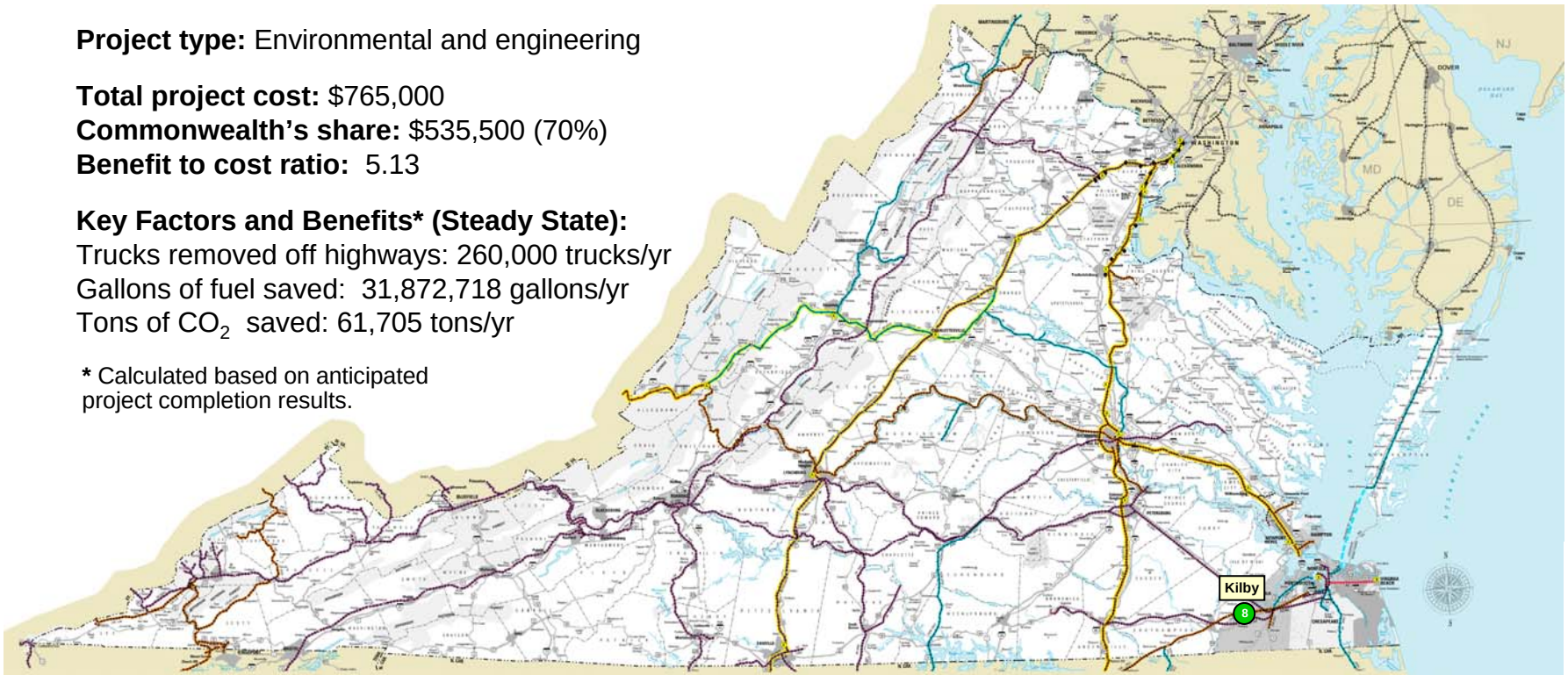
Description: The project is located near Suffolk and will extend the existing CSX siding at Kilby to achieve a new 10,000 foot passing siding as well as create two new support tracks of 6,000 feet each. The project will provide improved intermodal service by CSX to the new APM Terminal, VPA's Portsmouth Marine Terminal, and the proposed Craney Island Marine Terminal. The project is for environmental studies and 30% design (preliminary plans) for the proposed Kilby Yard improvements

Project type: Environmental and engineering

Total project cost: $765,000
Commonwealth's share: $535,500 (70%)
Benefit to cost ratio: 5.13

Key Factors and Benefits* (Steady State):
Trucks removed off highways: 260,000 trucks/yr
Gallons of fuel saved: 31,872,718 gallons/yr
Tons of CO_2 saved: 61,705 tons/yr

***** Calculated based on anticipated project completion results.



2007 State Railroad Map

April 9, 2008

FY2009 Rail Enhancement Fund
Recommended Project

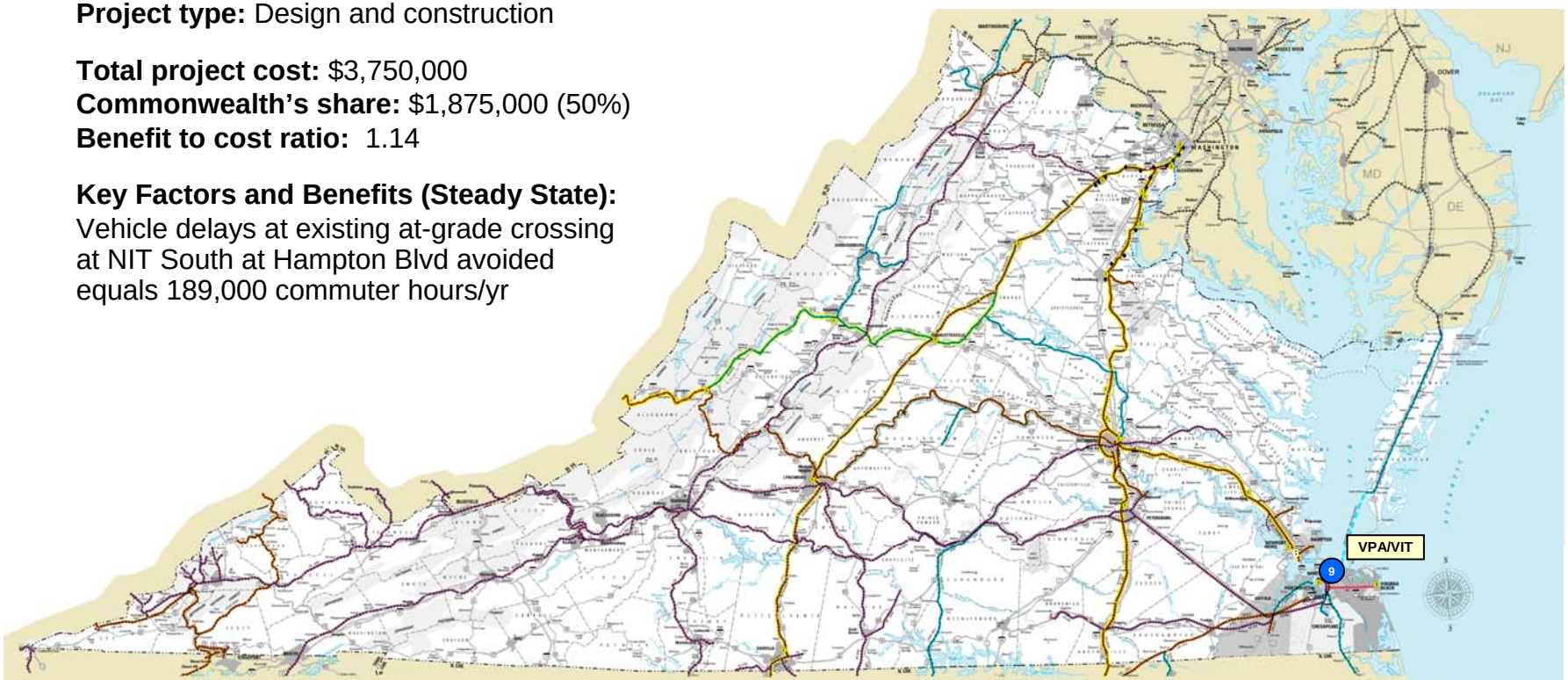
9 Virginia Port Authority / Virginia International Terminals
Norfolk Portsmouth Belt Line Improvements

Description: The Virginia Port Authority is separately acquiring approximately 33.5 acres of the existing Norfolk Portsmouth Belt Line rail marshalling yard facilities adjacent to the NIT North Terminal to provide additional train assembly and movement capacity, improved port rail access and routing, and increased operating efficiency. The REF project involves site improvements and the upgrade of 16,632 feet of track.

Project type: Design and construction

Total project cost: $3,750,000
Commonwealth's share: $1,875,000 (50%)
Benefit to cost ratio: 1.14

Key Factors and Benefits (Steady State):
Vehicle delays at existing at-grade crossing at NIT South at Hampton Blvd avoided equals 189,000 commuter hours/yr



2007 State Railroad Map

April 9, 2008

FY2009 Rail Enhancement Fund
Recommended Project

10

NCDOT Rail Division
SEHSR Tier II EIS Phase 2

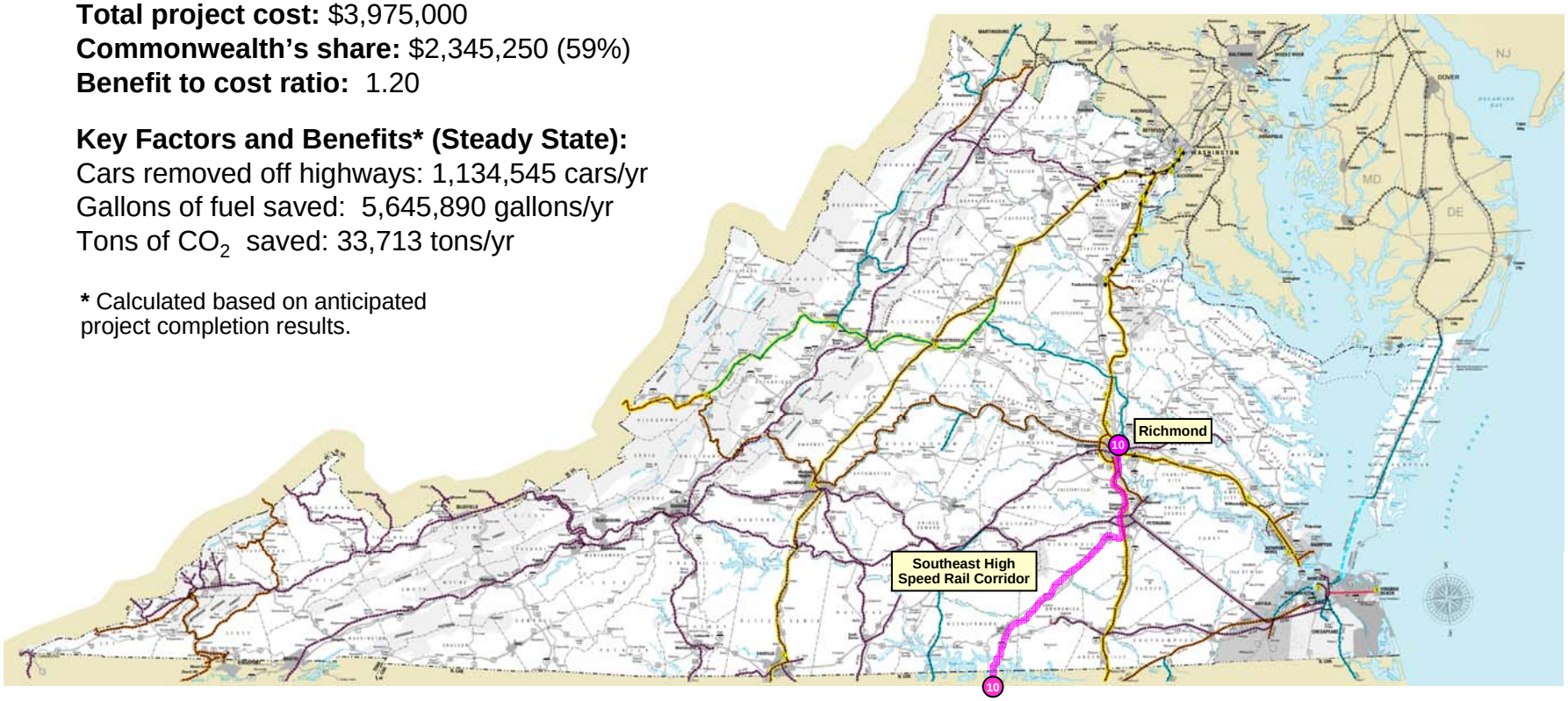
Description: Completion of the Tier II Environmental Impact Statement for railway and associated highway improvements for the proposed 168-mile Southeast High Speed Rail Corridor between Richmond and Raleigh, NC.

Project type: Environmental and engineering

Total project cost: $3,975,000
Commonwealth's share: $2,345,250 (59%)
Benefit to cost ratio: 1.20

Key Factors and Benefits* (Steady State):
Cars removed off highways: 1,134,545 cars/yr
Gallons of fuel saved: 5,645,890 gallons/yr
Tons of CO_2 saved: 33,713 tons/yr

***** Calculated based on anticipated project completion results.



2007 State Railroad Map

April 9, 2008

FY2009 Rail Enhancement Fund
Recommended Project

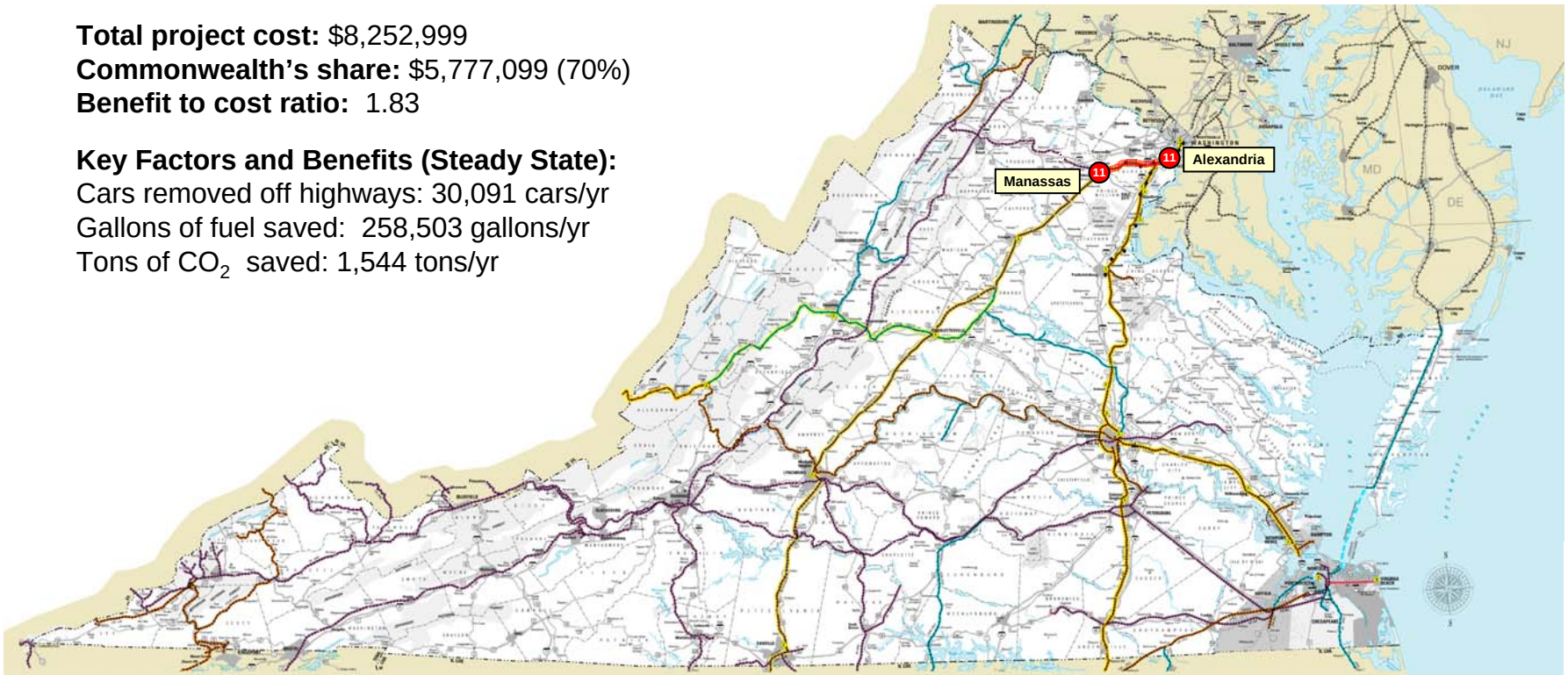
Passenger Corridor Initiatives
NS: VRE Route - Alexandria to Manassas

Description: VRE is the primary user on the two NS mainline tracks between Alexandria and Manassas. The project will provide capital improvements needed for NS to support Class 4 rail track standards for continued passenger train use of the system.

Project type: Design and construction

Total project cost: $8,252,999
Commonwealth's share: $5,777,099 (70%)
Benefit to cost ratio: 1.83

Key Factors and Benefits (Steady State):
Cars removed off highways: 30,091 cars/yr
Gallons of fuel saved: 258,503 gallons/yr
Tons of CO_2 saved: 1,544 tons/yr



2007 State Railroad Map

April 9, 2008

FY2009 Rail Enhancement Fund
Recommended Project

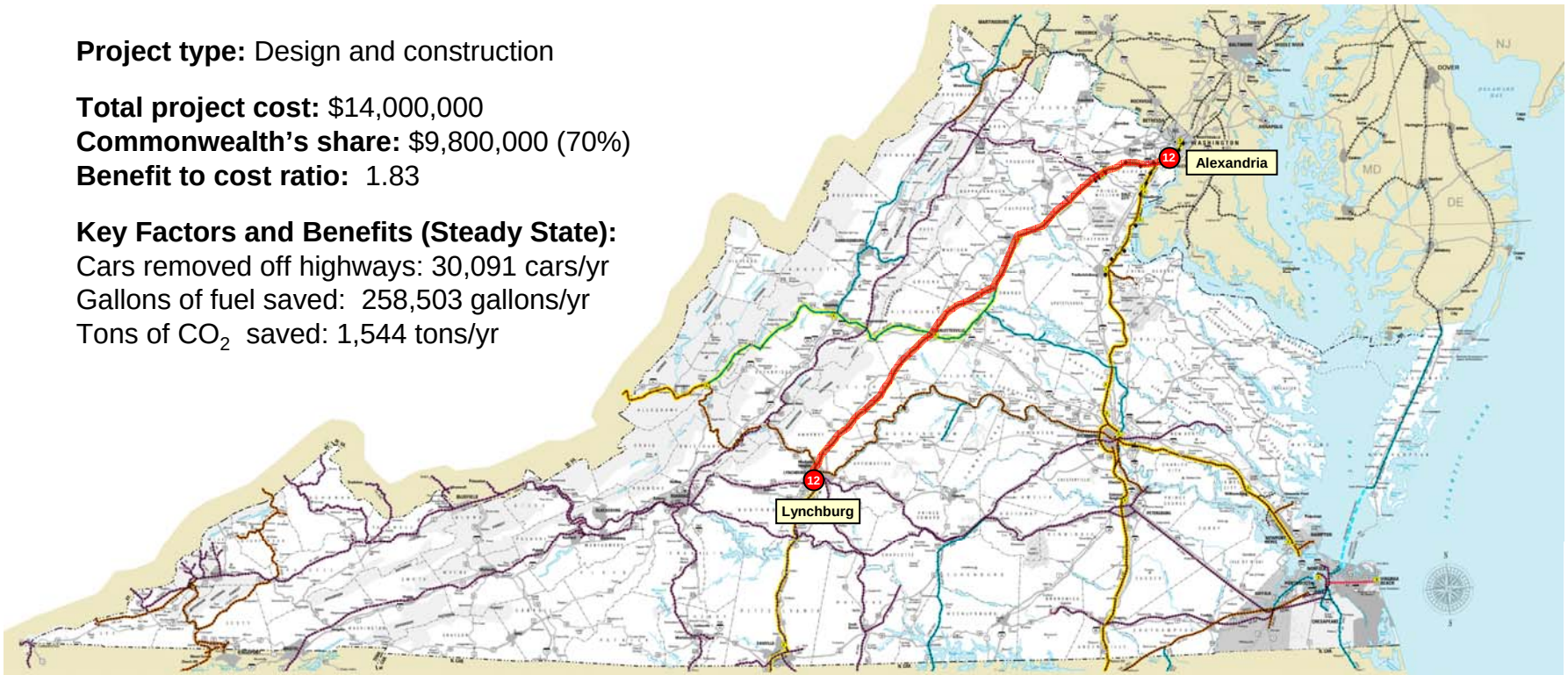
12 **Passenger Corridor Initiatives**
NS: Alexandria to Lynchburg

Description: The project will provide improvements to the NS mainline between Washington DC and Lynchburg for a proposed new Amtrak passenger service. Various curve, turnout modifications, speed improvements and potential station modifications are required for the new daily passenger service which will originate and end in Lynchburg. The improvements would also provide for increased speeds and capacity for NS freight operations.

Project type: Design and construction

Total project cost: $14,000,000
Commonwealth's share: $9,800,000 (70%)
Benefit to cost ratio: 1.83

Key Factors and Benefits (Steady State):
Cars removed off highways: 30,091 cars/yr
Gallons of fuel saved: 258,503 gallons/yr
Tons of CO_2 saved: 1,544 tons/yr



2007 State Railroad Map

April 9, 2008

FY2009 Rail Enhancement Fund
Recommended Project

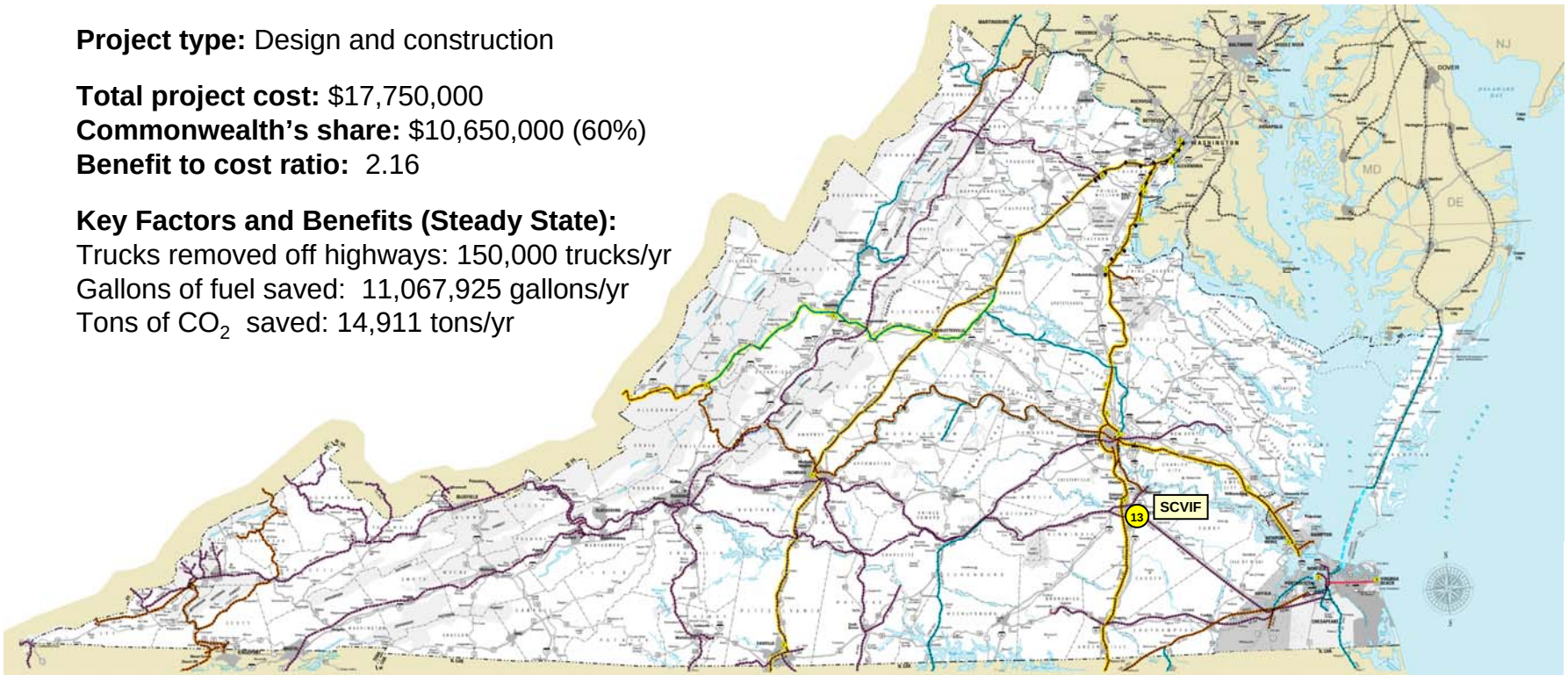
13 NS Route 460 / Heartland Corridor Initiatives
South Central Virginia Intermodal Facility

Description: The South Central Virginia Intermodal Facility is a new intermodal facility for the Petersburg/Richmond/Emporia Region. The facility will allow the transfer of containers to/from the Ports of Hampton Roads to the Richmond/Petersburg Region by rail rather than by truck (the current method of transfer). The facility is located on the NS Heartland Corridor and will provide regional access to Midwest and west coast markets.

Project type: Design and construction

Total project cost: $17,750,000
Commonwealth's share: $10,650,000 (60%)
Benefit to cost ratio: 2.16

Key Factors and Benefits (Steady State):
Trucks removed off highways: 150,000 trucks/yr
Gallons of fuel saved: 11,067,925 gallons/yr
Tons of CO_2 saved: 14,911 tons/yr



2007 State Railroad Map

April 9, 2008

FY2009 Rail Enhancement Fund
Recommended Project

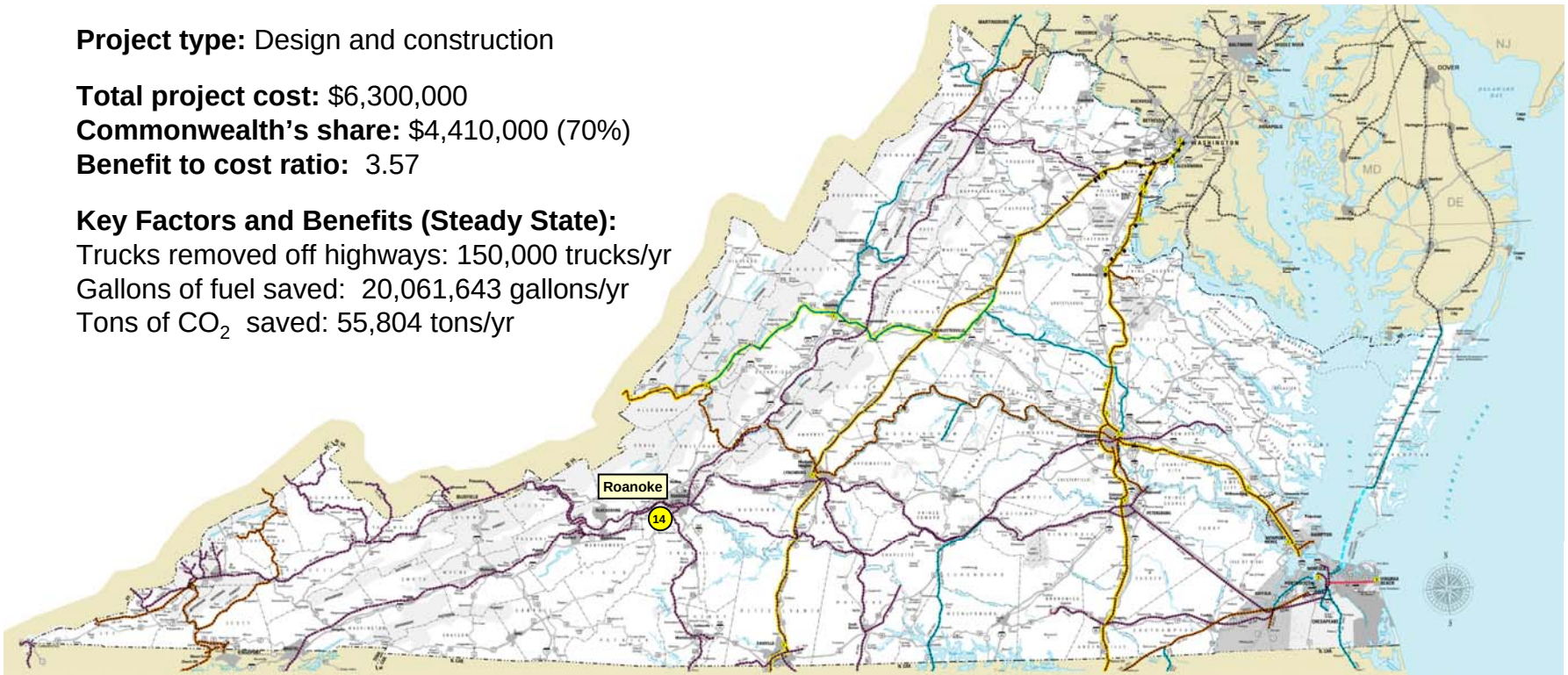
14 **NS Route 460 / Heartland Corridor Initiatives**
Roanoke Region Intermodal Facility (Supplemental)

Description: The proposed Roanoke Region Intermodal Facility would allow the transfer of containers to/from the Ports of Hampton Roads to the Roanoke and Southwestern Regions by rail rather than by truck (the current primary method of transfer). The facility would be located on the NS Heartland Corridor and would provide regional access to the Midwest and west coast markets. The project adds additional funding to a previous REF grant for the facility. Project funding would be contingent on a successful site selection for the facility in the Region.

Project type: Design and construction

Total project cost: $6,300,000
Commonwealth's share: $4,410,000 (70%)
Benefit to cost ratio: 3.57

Key Factors and Benefits (Steady State):
Trucks removed off highways: 150,000 trucks/yr
Gallons of fuel saved: 20,061,643 gallons/yr
Tons of CO_2 saved: 55,804 tons/yr

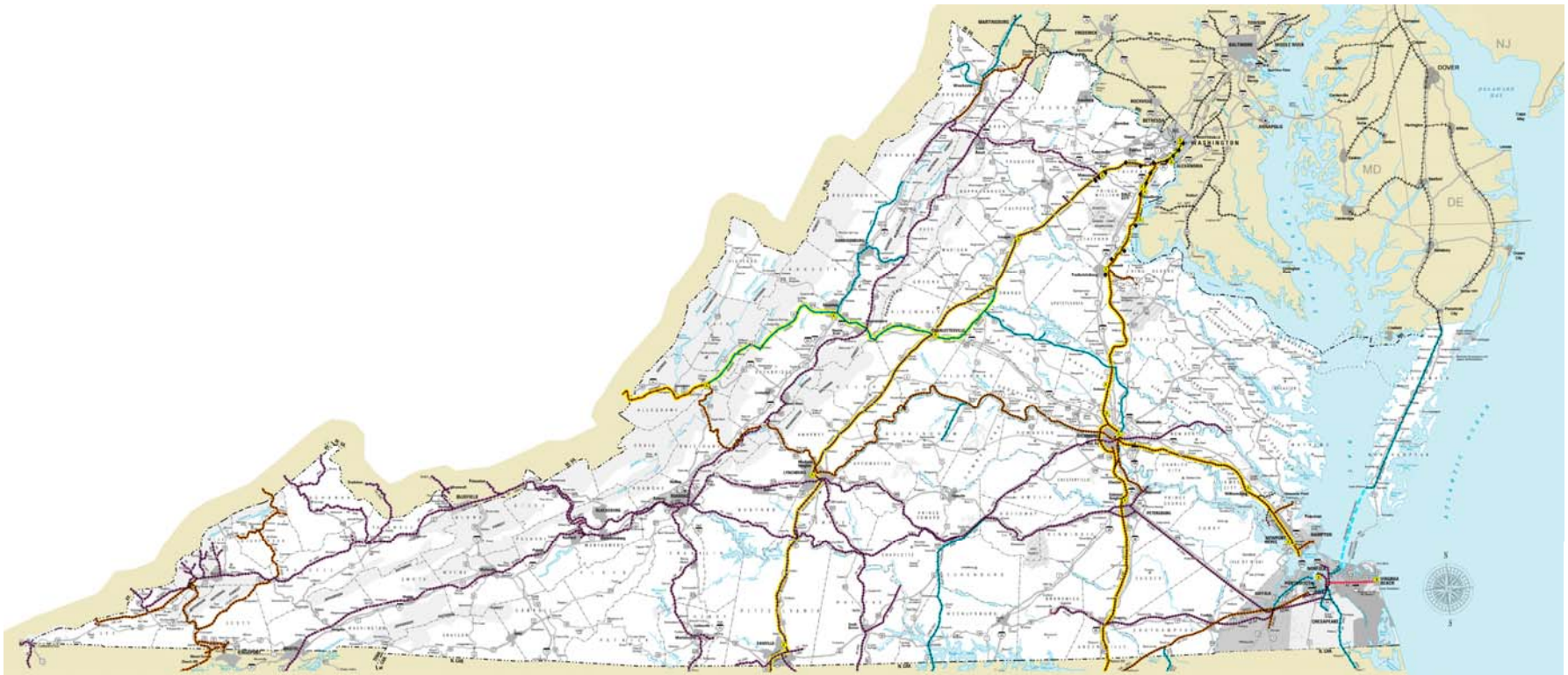


2007 State Railroad Map

April 9, 2008

Statewide Rail Plan

- Passenger and freight projects developed as a result of Statewide Rail Plan



2007 State Railroad Map

April 9, 2008

REF Projects Recommended for Funding

NO.	PROJECT NAME	App.	YEAR						TOTAL REF
			2009	2010	2011	2012	2013	2014	
1	NIT Central Rail Yard Expansion	VPA	$700,000	$14,000,000					$14,700,000
2	Craney Island Rail Connection	VPA				2,100,000	6,020,000	6,020,000	14,140,000
3	VRE Gainesville-Haymarket Extension Phase 2	VRE	1,137,500	1,462,500	650,000				3,250,000
4	VRE Cherry Hill Station & Third Track Phase 2	VRE	399,000	1,596,000	410,000				2,405,000
5	VRE Fredericksburg – Washington, DC Third Track	VRE	1,217,000	2,433,000					3,650,000
6	Fredericksburg, Richmond, and Newport News Passenger Rail Improvements	CSX	9,751,000						9,751,000
7	Double-Stack Rail Clearance	CSX		326,900	623,000				949,900
8	Kilby Rail Yard Improvements	CSX		267,750	267,750				535,500
9	Norfolk Portsmouth Belt Line Improvements	VPA	125,000	1,750,000					1,875,000
10	SEHSR Tier II EIS Phase 2	NCDOT	781,750	781,750	781,750				2,345,250
11	NS: VRE Route - Alexandria to Manassas	NS	649,797	591,837	108,627	2,172,787	1,670,327	583,724	5,777,099
12	NS: Alexandria to Lynchburg	NS		9,800,000					9,800,000
13	South Central Virginia Intermodal Facility	NS						10,650,000	10,650,000
14	Roanoke Region Intermodal Facility (Supplemental)	NS	4,410,000						4,410,000
15	Statewide Rail Plan		38,473,316	5,326,132	29,214,691	33,910,629	31,415,145	25,030,633	163,370,546
	RECOMMENDED PROJECTS		$57,644,363	$38,335,869	$32,055,818	$38,183,416	$39,105,472	$42,284,357	$247,609,295

April 9, 2008

REF Projects Not Recommended for Funding

Project Name	Applicant	Project Type	Total REF Requested ($)	Local Match ($)	Total Cost ($)
VRE Second Platforms	VRE	Construction	11,536,000	4,944,000	16,480,000
Deepwater Terminal RR Improvements	PORT	Construction	4,494,456	0	4,494,456
Rte 460 / Heartland Corridor Initiatives A) Kilby Crossovers	NS	Construction	2,450,000	1,050,000	3,500,000
Rte 460 / Heartland Corridor Initiatives B) Pamplin Siding	NS	Construction	4,200,000	1,800,000	6,000,000
Rte 460 / Heartland Corridor Initiatives C) Altavista Line Tunnels Clearances	NS	Construction	16,000,000	6,857,143	22,857,143
Rte 460 / Heartland Corridor Initiatives D) Montgomery Tunnel Clearance	NS	Construction	6,720,000	2,880,000	9,600,000

April 9, 2008

Next Steps

- RAB will make recommendations to Director on REF program of projects at its May 2008 meeting
- CTB will hold pre-allocation public hearings statewide: April – May, 2008
- CTB adoption of Six Year Improvement Plan: June 2008
- Funding availability: July 1, 2008

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April 9, 2008